

CLAIMS

1. Installation for manufacturing a wound rigid tubular pipe, the said rigid tubular pipe being intended to be installed subsea by a laying ship to carry hydrocarbons in particular, the said installation comprising an assembly unit for assembling a plurality of rigid tubes end to end to obtain lengths and for assembling the said lengths in such a way as to form the said rigid tubular pipe which is intended to be wound onto a storage reel situated on the said laying ship having undergone plastic deformation, characterized in that this installation comprises:

- intermediate winding and deforming means (11) arranged on first floating means (10) distinct from the said laying ship to plastically deform the said rigid tubular pipe (28) and wind it onto the said intermediate winding means (11) after the said rigid tubular pipe (28) has been formed; and
- connecting means (18) designed to connect together the said first floating means (10) and the said assembly unit.

2. Installation according to Claim 1, characterized in that the intermediate winding and deforming means (11) comprise an intermediate storage reel the drum diameter of which is greater than the drum diameter of the said storage reel (40) of the laying boat (42).

3. Installation according to Claim 2, characterized in that the drum diameter of the said intermediate storage reel (11) is greater than the maximum diameter of a last portion of rigid pipe likely to be wound onto the said storage reel of the laying boat (42).

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4. Installation according to any one of Claims 1 to 3, characterized in that the said assembly entity is mounted on second floating means (12).

5. Installation according to Claim 4, characterized in that the said second floating means (12) have a length of between 40 and 120 metres.

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6. Installation according to any one of Claims 1 to 5, characterized in that the said connecting means (18) are mounted articulated on the said first floating means (10) and on the said assembly entity (12) to  
10 allow relative movement of the said first floating means (10) and of the said assembly entity (12) at least in a vertical direction.

7. Installation according to Claim 6, characterized  
15 in that the said connecting means (18) comprise catching means that can be locked so as to obtain removable connecting means.

8. Installation according to any one of Claims 1 to  
20 7, characterized in that the said connecting means (18) are built with a lattice configuration.

9. Installation according to any one of Claims 1 to 8, characterized in that the said intermediate winding  
25 means (11) comprise an intermediate storage reel mounted vertically on the said first floating means (10) and which is designed to be driven in rotation about its horizontally-arranged axis so as to wound the said rigid tubular pipe (28).

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10. Installation according to any one of Claims 1 to 9, characterized in that the said first floating means (10) comprise ballast weight tanks (38) to weigh down the said first floating means (10) according to the  
35 length of rigid tubular pipe wound onto the said intermediate winding means (11).

11. Installation according to any one of Claims 1 to 10, characterized in that the said first floating means (10) consist of a barge or of a vessel with a stable hull.

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12. Method for manufacturing a wound rigid tubular pipe, the said rigid tubular pipe being intended to be installed subsea by a laying ship to carry hydrocarbons in particular, the said method comprising a step of  
10 assembling a plurality of rigid tubes end to end to obtain lengths and of assembling the said lengths in such a way as to form the said rigid tubular pipe which is intended to be wound onto a storage reel situated on the said laying ship having undergone plastic  
15 deformation, characterized in that this method comprises the following steps:

- the said rigid tubular pipe is plastically deformed then wound onto first floating means (10) separate from the said laying ship after the said rigid  
20 tubular pipe (28) has been formed; and

- the wound rigid tubular pipe is transferred from the said floating means to the said laying ship by rewinding it onto the said storage reel.